

ABSTRACT OF THE INVENTION

Dissipative ceramic bonding tips for wire bonding
5 electrical connections to bonding pads on integrated circuits
chips and packages are disclosed. In accordance with the
principles of the present invention, to avoid damaging delicate
electronic devices by any electrostatic discharge, an ultrasonic
bonding wedge tool tip must conduct electricity at a rate
10 sufficient to prevent charge buildup, but not at so high a rate
as to overload the device being bonded. For best results, a
resistance in the tip assembly itself should range from 10^5 to
 10^{12} ohms. In addition, the wedges must also have specific
mechanical properties to function satisfactorily.